

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1. (currently amended): A method of dynamic medical imaging of a subject comprising the steps of: ~~[[the]]~~ obtaining a plurality of time separated images of the subject; registering the plurality of time separated images together to match corresponding locations in the images to each other;

measuring from the registered images ~~the~~ a temporal behaviour of an imaged region at a location in the subject; and

measuring a quality of the registration of the time separated images by:

comparing the measured temporal behaviour with a model of ~~[[the]]~~ expected temporal behaviour of the imaged region to ~~determine the~~ calculate a level of agreement ~~therebetween—between the measured temporal behaviour and the expected temporal~~ behaviour, and determining as a measure of the quality of the registration of the time separated images from said calculated level of agreement, wherein said measure of the quality of registration indicates that registration quality is poorer when the calculated level of agreement between the measured temporal behaviour and the expected temporal behaviour is lower.

Claim 2. (original): A method according to claim 1 wherein obtaining the images involves the use of an imaging agent and said model is a model of the temporal behaviour of the imaging agent.

Claim 3. (original): A method according to claim 2 wherein the imaging agent is a contrast agent.

Claim 4. (original): A method according to claim 1 wherein the level of agreement between the measured temporal behaviour and the expected temporal behaviour is displayed.

Claim 5. (original): A method according to claim 4 wherein the level of agreement is displayed overlying an image of the subject.

Claim 6. (original): A method according to claim 1 further comprising re-executing the step of registering the plurality of time separated images together in imaged regions where the level of agreement is poor.

Claim 7. (original): A method according to claim 6 wherein the registration uses a parameterised process and is re-executed using different registration parameters.

Claim 8. (original): A method according to claim 6 wherein the registration is re-executed at a different resolution.

Claim 9. (original): A method according to claim 6 wherein the registration is re-executed at a different scale.

Claim 10. (original): A method according to claim 6 wherein the registration comprises searching through a search window defined in one of the images and the registration is re-executed using a different sized search window.

Claim 11. (original): A method according to claim 1 wherein the model is a temporal model of the take-up and wash-out of an imaging agent administered to the subject.

Claim 12. (original): A method according to claim 1 wherein the subject is a living human, animal or plant.

Claim 13. (original): A method according to claim 1 wherein the images are acquired by one of magnetic resonance imaging, computed tomography, positron emission tomography, single photon emission computed tomography, nuclear medicine, ultrasound, x-ray and optical imaging.

Claim 14. (currently amended): A computer readable storage medium carrying a computer program comprising program code means for executing which causes a computer to execute the steps in claim 1 of registering the plurality of time separated images together to match corresponding locations in the images to each other; measuring from the registered images the temporal behaviour at a location in the subject; and measuring the quality of the registration of the time separated images by: comparing the measured temporal behaviour to a model of the expected temporal behaviour to ~~determine~~ calculate the level of agreement ~~therebetween~~ between the measured temporal behaviour and the expected temporal behaviour, and determining as a measure of the quality of the registration of the time separated images from said calculated level of agreement, wherein said measure of the quality of registration indicates that registration quality is poorer when the calculated level of agreement between the measured temporal behaviour and the expected temporal behaviour is lower.

Claim 15. (canceled)

Claim 16. (currently amended): Dynamic medical image processing apparatus adapted to execute the steps in claim 1 of registering the plurality of time separated images together to match corresponding locations in the images to each other; measuring from the registered images the temporal behaviour of the imaging agent at a location in the subject; and measuring the quality of the registration of the time separated images by:

comparing the measured temporal behaviour of the imaging agent to a model of the expected temporal behaviour to ~~determine~~ calculate the level of agreement ~~therebetween~~ between the measured temporal behaviour and the expected temporal behaviour, and determining as— a measure of the quality of the registration of the time separated images from said calculated level agreement, wherein said measure of the quality of registration indicates that registration quality is poorer when the calculated level of agreement between the measured temporal behaviour and the expected temporal behaviour is lower.